



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/684,417

10/15/2003

Dong-Soo Nam

102-1001

4388

38209

7590

11/26/2008

STANZIONE & KIM, LLP

919 18TH STREET, N.W.

SUITE 440

WASHINGTON, DC 20006

EXAMINER

MORRISON, THOMAS A

ART UNIT

PAPER NUMBER

3653

MAIL DATE

DELIVERY MODE

11/26/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 10-13 and 15-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 5-43082 (hereinafter “JP’082”).

Regarding claim 10, Figs. 1-5 show a paper-discharging apparatus to discharge a sheet of paper between a paper-discharging roller (26) and an idle roller (33) which are disposed in a paper-discharging port side of an image-forming device, comprising:

a supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) formed on the paper-discharging port side of the image-forming apparatus having opposite ends thereof fixedly coupled to a body of the image-forming apparatus (see, e.g., Fig. 5);

a supporting bracket (30) having a middle portion formed between opposite ends thereof, on which the idle roller (33) is rotatably mounted to contact the paper-discharging roller (26); and

a spacing adjustment unit (including a and 31) to flexibly couple the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) to adjust a distance between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion

Art Unit: 3653

of the supporting bracket (30) according to an external force exerted on one of the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30), wherein the spacing adjustment unit (including a and 31) comprises:

an elastic member (31) provided between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) so that opposite ends thereof abut with the supporting bracket (30) and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5), respectively, wherein the elastic member (31) is disposed between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) to elastically adjust the distance between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30); and

a guide unit (including a) to suppress transverse and bending movements of the elastic member (31), wherein the guide unit (including a) comprises:

at least one clamping boss (outer surface of a where spring is wrapped around) protruding from the supporting bracket (30) such that the clamping boss (outer surface of a where spring is wrapped around) is located between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) when the supporting plate (unnumbered plate to which element a is connected in

Art Unit: 3653

Figs. 3-5) and the supporting bracket (30) are assembled; and a hole (threaded hole in the supporting plate) formed on the support plate (unnumbered plate to which element a is connected in Figs. 3-5), and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) are connected with each other by a clamping screw (screw thread portion of a) inserted into the hole (threaded hole in the supporting plate) to be engaged with the clamping boss. Figs. 1-5 show that the screw thread portion of element a is built into, or attached to (i.e., engaged with) the clamping boss.

Alternatively, it is noted that in the recitation “the supporting plate and the supporting bracket are connected with each other by a clamping screw inserted into the hole **to be engaged with the clamping boss**”, the bolded portion of this recitation is functional language which does not distinguish this apparatus claim from the prior art apparatus of JP’082. Specifically, MPEP, section 2114 states that, “While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.” See MPEP, section 2114. Thus, all of the limitations of claim 10 are met by JP’082.

Regarding claim 11, Figs. 1-5 show that the spacing adjustment unit (including a and 31) controls the supporting bracket (30) to maintain a contact pressure generated between the paper-discharging roller (26) and the idle roller (33) constant while

Art Unit: 3653

adjusting the distance between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30).

Regarding claim 12, Figs. 1-5 show that the middle portion of the supporting bracket (30) is spaced-apart from the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) by the distance in a direction perpendicular to the paper disposed between the paper-discharging roller (26) and the idle roller (33).

Regarding claim 13, Figs. 1-5 show that when the external force is exerted on one of the supporting plate and the supporting bracket, a portion of the supporting plate moves toward the middle portion of the supporting bracket while a distance between the middle portion of the supporting bracket and the paper-discharging roller is maintained constant. More specifically, in the recitation “wherein **when the external force is exerted on one of the supporting plate and the supporting bracket**, a portion of the supporting plate moves toward the middle portion of the supporting bracket while a distance between the middle portion of the supporting bracket and the paper-discharging roller is maintained constant”, the bolded portion of this recitation is a “conditional limitation” that need not ever occur. For example, if an external force is not exerted on the supporting plate or the supporting bracket, the conditional limitations are never satisfied. As such, the rest of the limitations in the recitation need not ever occur. Thus, this recitation does not distinguish claim 13 from the prior art apparatus of JP’082.

Regarding claim 15, Figs. 1-5 show a paper-discharging apparatus to discharge a sheet of paper between a paper-discharging roller (26) and an idle roller (33) which are disposed in a paper-discharging port side of an image-forming device, comprising:

a supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) formed on the paper-discharging port side of the image-forming apparatus having opposite ends thereof fixedly coupled to a body of the image-forming apparatus (see, e.g., Fig. 5);

a supporting bracket (30) having a middle portion formed between opposite ends thereof, on which the idle roller (33) is rotatably mounted to contact the paper-discharging roller (26); and

a spacing adjustment unit (including a and 31) to flexibly couple the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) to adjust a distance between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) according to an external force exerted on one of the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) wherein the spacing adjustment unit (including a and 31) comprises:

a plurality of elastic members (31 and 31) disposed between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) to elastically adjust the distance between the supporting plate ((unnumbered plate to which element a is connected in Figs. 3-5)) and the middle

Art Unit: 3653

portion of the supporting bracket (30), wherein at least one of the elastic members (31) is provided between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) so that opposite ends thereof abut with the supporting bracket (30) and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5), respectively; and

a guide unit (including a) to suppress transverse and bending movements of the elastic member (31), wherein the guide unit (including a) comprises:

at least one clamping boss (outer surface of element a on which the spring is wound) protruding from the supporting bracket (30) such that the clamping boss (outer surface of element a on which the spring is wound) is located between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) when the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) are assembled; and

a hole (threaded hole in the supporting plate) formed on the support plate (unnumbered plate to which element a is connected in Figs. 3-5), and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) are connected with each other by a clamping screw (screw portion of element a) inserted into the hole to be engaged with the clamping boss. Figs. 1-5 show that the screw thread portion of element a is built into, or attached to (i.e., engaged with) the clamping boss.



Alternatively, it is noted that in the recitation “the supporting plate and the supporting bracket are connected with each other by a clamping screw inserted into the hole **to be engaged with the clamping boss**”, the bolded portion of this recitation is functional language which does not distinguish this apparatus claim from the prior art apparatus of JP’082. Specifically, MPEP, section 2114 states that, “While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.” See MPEP, section 2114. Thus, all of the limitations of claim 15 are met by JP’082.

Regarding claim 16, Figs. 1-5 show that the elastic members (31 and 31) are disposed between the opposite ends of the supporting bracket (30) at a predetermined interval.

Regarding claim 17, Figs. 1-5 show that the elastic members (31 and 31) are compressed by different amounts to have different amounts of elastic potential. This can occur, for example, when non-uniform thickness sheets are fed. One of the elastic members (31) can be compressed by a different amount than that of the other elastic member (31).

Regarding claim 18, Figs. 1-5 show that the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) elastically moves toward the supporting bracket (30) according to an elasticity of the elastic member (31) while a distance between the paper-discharging roller (26) and the idle roller (33) is maintained constant.

Regarding claim 19, Figs. 1-5 show a paper-discharging apparatus to discharge a sheet of paper between a plurality of paper-discharging rollers (26 and 26) and a plurality of idle rollers (33 and 33), which are rotated by corresponding ones of the paper-discharging rollers (26 and 26) in an image-forming device, the paper-discharging apparatus comprising:

- a supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) formed on a paper-discharging port side of the image-forming device having opposite ends thereof mounted on a body of the image forming device (see, e.g., Fig. 5);

- a supporting bracket (30) having a middle portion formed between opposite ends thereof, on which the idle rollers (33) are rotatably mounted to contact corresponding ones of the paper-discharging rollers (26); and

- a spacing adjustment unit (including a and 31) disposed between the middle portion of the supporting bracket (30) and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) to flexibly couple the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) with the middle portion of the supporting bracket (30) to maintain a contact pressure generated between corresponding ones of the paper-discharging rollers (26) and the idle rollers (33) regardless of an external force exerted on one of the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30), wherein the spacing adjustment unit (including a and 31) comprises:

- an elastic member (31) provided between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the

Art Unit: 3653

supporting bracket (30) so that opposite ends thereof abut with the supporting bracket (30) and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5), respectively; and

a guide unit (including a) to suppress transverse and bending movements of the elastic member (31), wherein the guide unit (including a) comprises:

at least one clamping boss (outer surface of element a on which the spring is wound) protruding from the supporting bracket (30) such that the clamping boss (outer surface of element a on which the spring is wound) is located between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) when the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) are assembled; and

a hole (threaded hole in the supporting plate) formed on the support plate (unnumbered plate to which element a is connected in Figs. 3-5), and the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the supporting bracket (30) are connected with each other by a clamping screw (screw thread on element a) inserted into the hole to be engaged with the clamping boss. Figs. 1-5 show that the screw thread portion of element "a" is built into, or attached to (i.e., engaged with) the clamping boss.

Alternatively, it is note that in the recitation "the supporting plate and the supporting bracket are connected with each other by a clamping screw inserted into the hole **to be engaged with the clamping boss**", the bolded portion of this

Art Unit: 3653

recitation is functional language which does not distinguish this apparatus claim from the prior art apparatus of JP'082. Specifically, MPEP, section 2114 states that, "While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." See MPEP, section 2114. Thus, all of the limitations of claim 19 are met by JP'082.

Regarding claim 20, Figs. 1-5 show that a distance between the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) and the middle portion of the supporting bracket (30) varies according to the spacing adjustment unit (including a and 31) while the contact pressure is maintained constant.

Regarding claim 21, Figs. 1-5 show that the middle portion of the supporting bracket (30) is spaced-apart from the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) by a distance which varies according to deformation of the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5).

Regarding claim 22, Figs. 1-5 show that a distance between the middle portion of the supporting bracket (30) and the paper-discharging rollers (26) is maintained constant.

Regarding claim 23, Figs. 1-5 show that the middle portion of the supporting bracket (30) is not deformed in a direction perpendicular to an axis passing through a center of each of the paper-discharging rollers (26) while the supporting plate (unnumbered plate to which element a is connected in Figs. 3-5) is elastically deformed.

Art Unit: 3653

Regarding the recitation “wherein the middle portion of the supporting bracket is not deformed in a direction perpendicular to an axis passing through a center of each of the paper-discharging rollers **while the supporting plate is elastically deformed**”, the bolded portion of this recitation is a “conditional limitation” that need not ever occur. For example, the supporting plate may never get elastically deformed. As such, this recitation does not distinguish claim 23 from the prior art apparatus of JP’082.

### ***Response to Arguments***

2. Applicant's arguments filed 8/13/08 have been fully considered but they are not persuasive.

Applicant argues

Claims 1, 10, 19, and 24 have been amended to recite all of the features originally appearing in claims 2, 4, 5, and 7, now canceled.

Claim 15 has been rewritten into independent claim form to recite all of the features originally appearing in claims 10, 2, 5, and 7.

Dependent claims 3, 6, 8, and 18 have been amended to depend from one of amended independent claims 1 and 10, instead of canceled claims 2, 5, 7, and 14, respectively.

In view of the foregoing amendments, it is respectfully submitted that all of the pending claims are patentably distinguishable over the prior art of record, and allowance of all the pending claims are respectfully requested.

In response, only claims 7-9 were indicated by the examiner as being allowable if rewritten in independent form. None of the claims 10-13 and 15-23 includes the exact same combination of limitations as those set forth in claim 7 of the Amendment dated 2/19/08. As such, claims 10-13 and 15-23 have been rejected in view of Japanese Publication No. 5-43082, as outlined above.

### ***Allowable Subject Matter***

3. Claims 1, 3, 6, 8-9 and 24-25 are allowed.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS A. MORRISON whose telephone number is (571)272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick H. Mackey/  
Supervisory Patent Examiner, Art  
Unit 3653

11/17/08